

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 7,466,776 B2      Issue Date : 12/16/2008  
Appl. No. : 10/708,941      Filing Date: 04/02/2004  
Inventor : Ti-Wen Yuan, et al.  
Docket No.: MTKP0058USA

Title: AUTOMATIC GAIN CONTROL METHOD AND APPARATUS IN  
COMMUNICATION SYSTEM HAVING DISCONTINUOUS  
TRANSMISSION MODE

To: Commissioner for Patents  
P.O. BOX 1450  
Alexandria, VA 22313-1450

Subject: Request for Certificate of Correction of Office  
Mistake

Dear Sir,

The name of the assignee listed on the front page of the Patent is incorrect (attachment 1). Documents on record indicate this as an Office mistake of consequence.

The applicant hereby requests that a Certificate of Correction be issued under 37 CFR 1.322 to correct the name of the assignee from **Mediatek Corporation** to **Mediatek Incorporation** which was correctly listed on the Assignment Document recorded on 4/2/2004 (attachment 2) and the PTOL-85 form submitted on 11/13/2008 (attachment 3).

Sincerely yours,

\_\_\_\_\_/Winston Hsu/\_\_\_\_\_  
Date: 01/12/2009

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,466,776 B2  
APPLICATION NO.: 10/708,941  
ISSUE DATE : 12/16/2008  
INVENTOR(S) : Ti-Wen Yuan; Wei-Sheng Yin

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

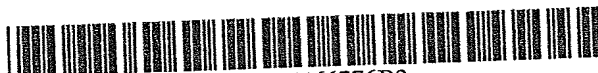
On the title page, item (73), correct the name of the assignee from "Mediatek Corporation" to "Mediatek Incorporation."

MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Please correct the name of the assignee from "Mediatek Corporation" to "Mediatek Incorporation."



US007466776B2

(12) **United States Patent**  
**Yuan et al.**

(10) **Patent No.:** **US 7,466,776 B2**  
(45) **Date of Patent:** **Dec. 16, 2008**

(54) **AUTOMATIC GAIN CONTROL METHOD AND APPARATUS IN COMMUNICATION SYSTEM HAVING DISCONTINUOUS TRANSMISSION MODE**

(75) Inventors: **Ti-Wen Yuan**, Hsin-Chu County (TW);  
**Wei-Sheng Yin**, Tai-Tung Hsien (TW)

(73) Assignee: **Mediatek Corporation**, Hsin-Chu Hsien (TW)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 680 days.

(21) Appl. No.: **10/708,941**

(22) Filed: **Apr. 2, 2004**

(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

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(51) Int. Cl. **H04L 27/08** (2006.01)

(52) U.S. Cl. .... **375/345; 375/295; 375/316; 375/343; 375/344; 375/348**

(58) **Field of Classification Search** ..... **375/345, 375/352, 136-137, 145-147, 295, 316, 317, 375/344, 348, 350; 455/67.1, 232.1**  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**  
3,934,204 A \* 1/1976 Hill ..... 455/136

5,083,304 A \* 1/1992 Cahill ..... 375/345  
5,301,364 A \* 4/1994 Arens et al. .... 455/69  
6,052,566 A \* 4/2000 Abramsky et al. .... 455/67.11  
2001/0055350 A1 \* 12/2001 Higure ..... 375/345  
2002/0163980 A1 \* 11/2002 Ruohonen ..... 375/345  
2003/0026363 A1 \* 2/2003 Stoter et al. .... 375/345  
2003/0128744 A1 \* 7/2003 Yeo et al. .... 375/147  
2003/0194029 A1 \* 10/2003 Heinonen et al. .... 375/345  
2005/0003783 A1 \* 1/2005 Ben-Ayun et al. .... 455/232.1

\* cited by examiner

*Primary Examiner*—Shuwang Liu

*Assistant Examiner*—Hirdepal Singh

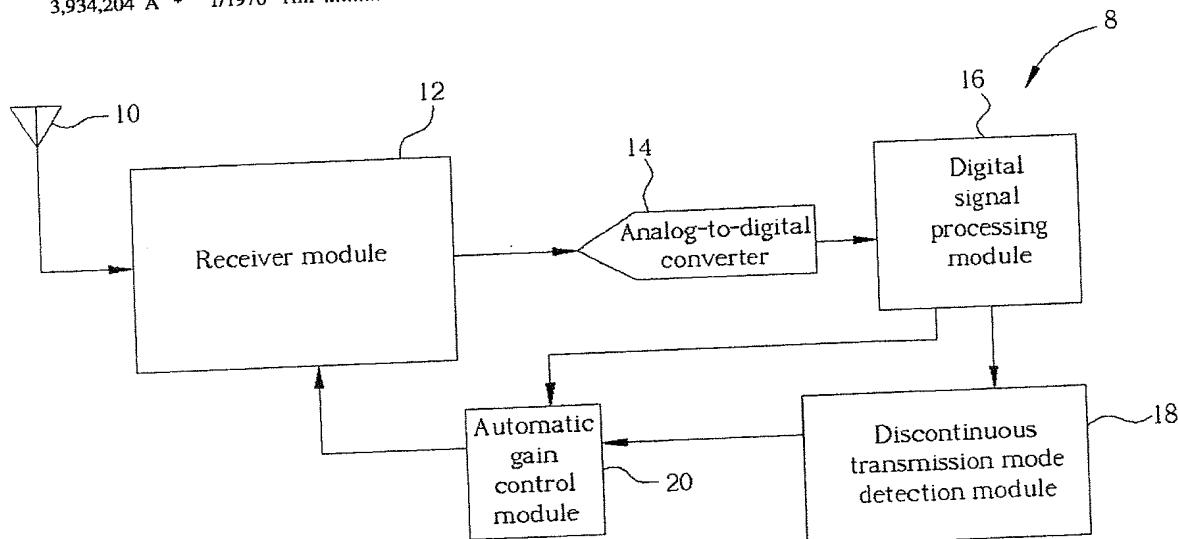
(74) *Attorney, Agent, or Firm*—Winston Hsu

(57)

# ABSTRACT

An automatic gain control method used in a wireless receiver is disclosed. The method comprise the following steps: Receiving a first frame, amplifying a RF signal corresponding to the first frame with a gain value and down converting the RF signal to generate a baseband signal. Updating the gain value according to the power level of the baseband signal corresponding to the first frame, then using the updated gain value to amplify the RF signal corresponding to a second frame when receiving the second frame. Determining whether a first signal block is in the discontinuous transmission mode or not, wherein the first frame belongs to the first signal block. And resuming the gain value according to the power level of the baseband signal corresponding to a third frame if the first signal block is in the discontinuous transmission mode.

**24 Claims, 4 Drawing Sheets**



attachment 2

10/708,941	<b>AUTOMATIC GAIN CONTROL METHOD AND APPARATUS IN COMMUNICATION SYSTEM HAVING DISCONTINUOUS TRANSMISSION MODE</b>	<b>12-28- 2008::22:15:00</b>
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**Patent Assignment Abstract of Title****Total Assignments: 1**

Application #: 10708941

Filing Dt: 04/02/2004

Patent #: 7466776

Issue Dt: 12/16/2008

PCT #: NONE

Publication #: US20040196931

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Inventors: Ti-Wen Yuan, Wei-Sheng Yin

Title: AUTOMATIC GAIN CONTROL METHOD AND APPARATUS IN COMMUNICATION SYSTEM HAVING DISCONTINUOUS TRANSMISSION MODE

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Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignors: YUAN, TI-WEN

Exec Dt: 10/23/2003

YIN, WEI-SHENG

Exec Dt: 10/23/2003

Assignee: MEDIATEK INCORPORATION

5F, NO. 1-2, INNOVATION ROAD 1, SCIENCE-BASED  
INDUSTRIAL PARK  
HSIN-CHU HSIEN, TAIWAN

Correspondent: NAIPO (NORTH AMERICA INTERNATIONAL PATEN

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Janice Chen	(Depositor's name)
	(Signature)
11/13/2008	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,941	04/02/2004	Ti-Wen Yuan	MTKP0058USA	2940

TITLE OF INVENTION:

AUTOMATIC GAIN CONTROL METHOD AND APPARATUS IN COMMUNICATION SYSTEM HAVING DISCONTINUOUS TRANSMISSION MODE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$1810	01/08/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
SINGH, HIRDEPAL	2611	375-345000

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1 Winston Hsu  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_

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MEDIATEK INCORPORATION

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

5F, No. 1-2, Innovation Road 1, Science-Based Industrial Park, Hsin-Chu Hsien, Taiwan, R.O.C.

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